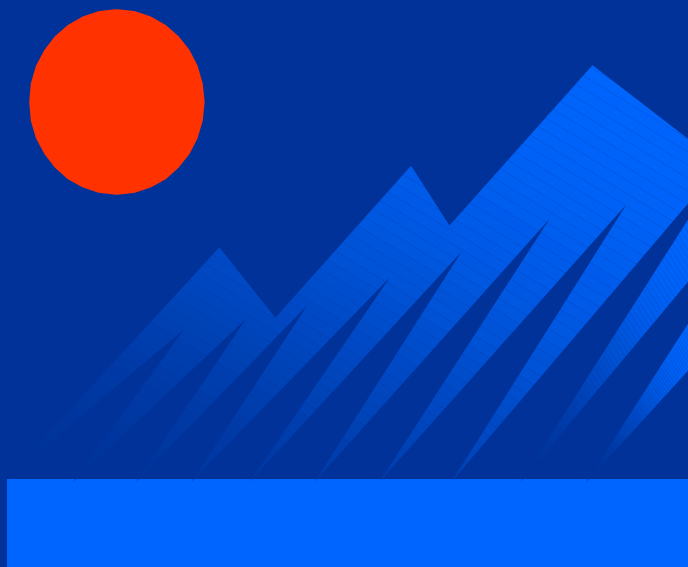




National Renewable Energy Laboratory



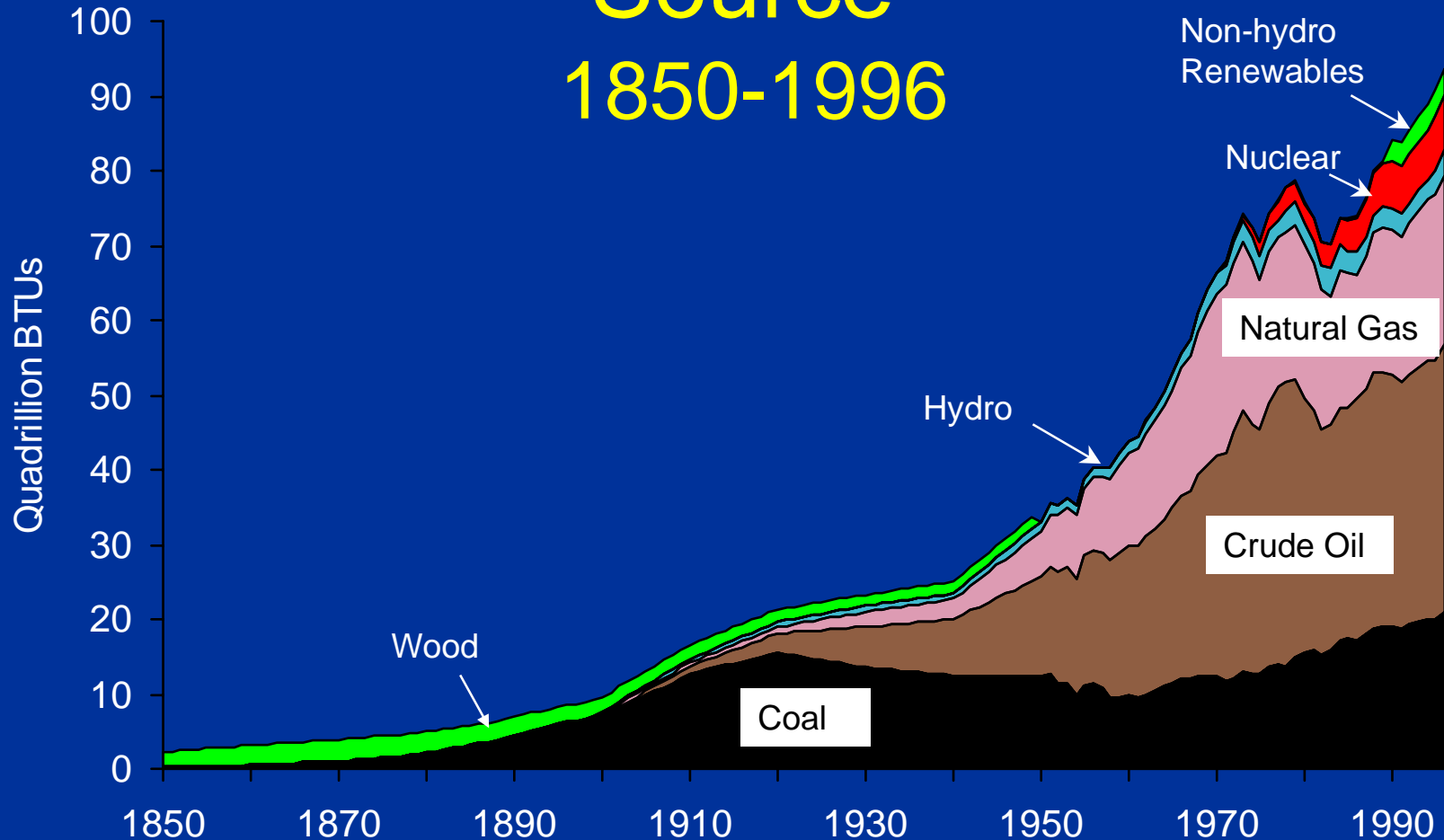
**Operated for the U.S. Department of Energy by
Midwest Research Institute • Battelle • Bechtel**

Major DOE National Laboratories



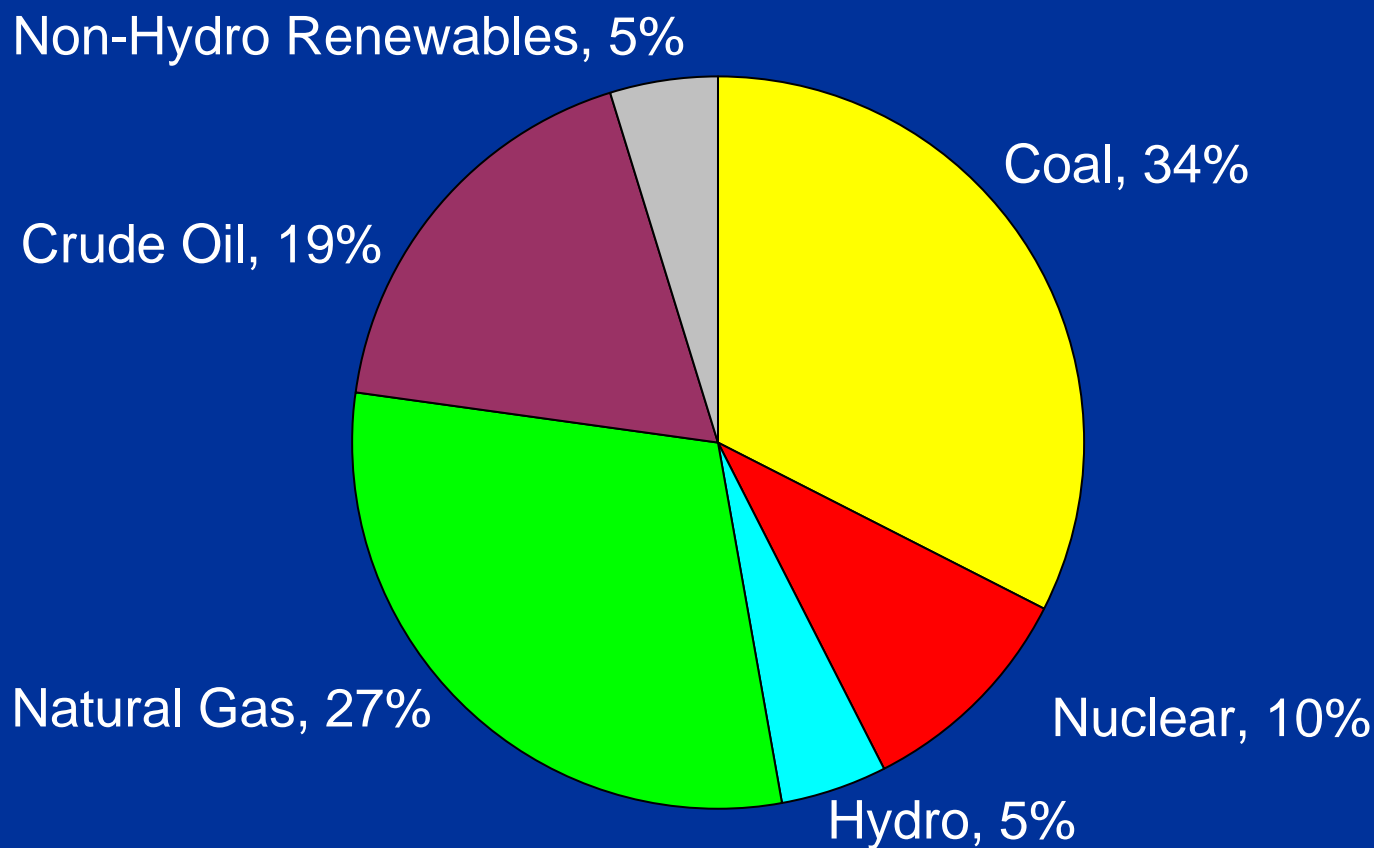
- ◆ Defense Program Labs
- Office of Science Labs
- Energy Efficiency and Renewable Energy Lab
- ◆ Environmental Management Lab
- ✚ Fossil Energy Lab

U.S. Energy Consumption by Source 1850-1996



Source: 1850-1949, Energy Perspectives: A Presentation of Major Energy and Energy-Related Data, U.S. Department of the Interior, 1975; 1950-1996, Annual Energy Review 1996, Table 1.3. Note: Between 1950 and 1990, there was no reporting of non-utility use of renewables.

U.S. Energy Production by Source 1998





National Renewable Energy Laboratory

Only national laboratory ***dedicated*** to renewable energy and energy efficiency R&D

Research spans fundamental ***science*** to ***technology*** solutions

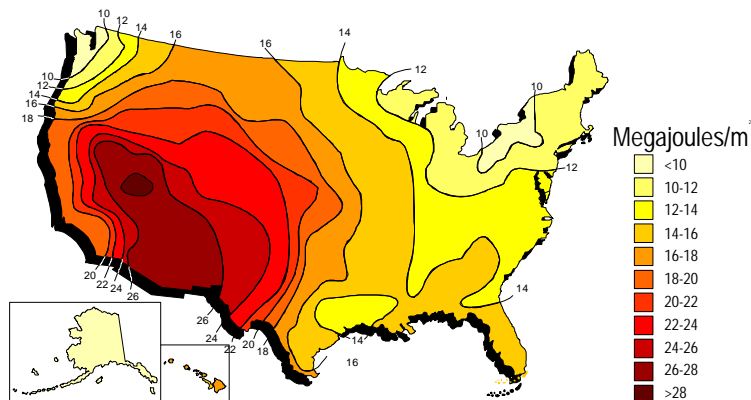
Collaboration with industry and university partners is a hallmark

Research programs ***linked*** to market opportunities

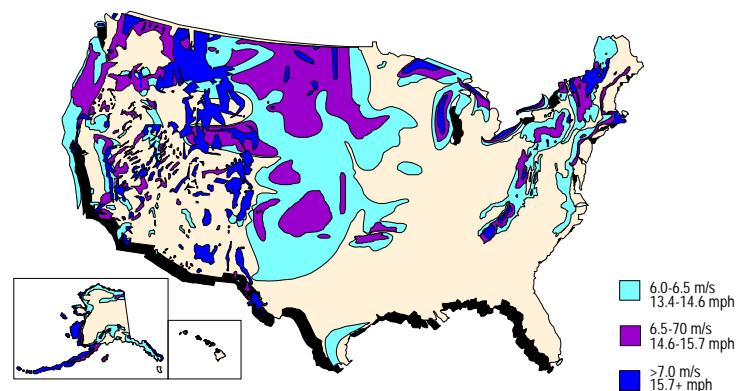


U.S. Renewable Energy Resources

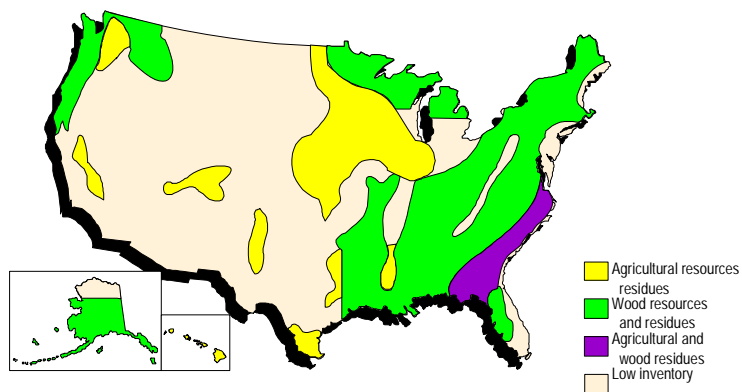
Solar



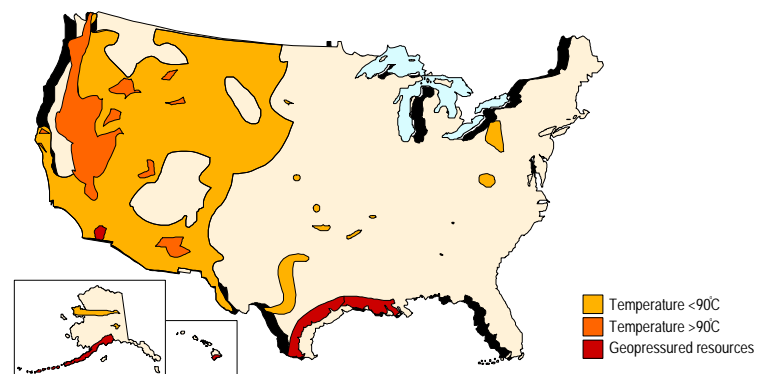
Wind



Biomass

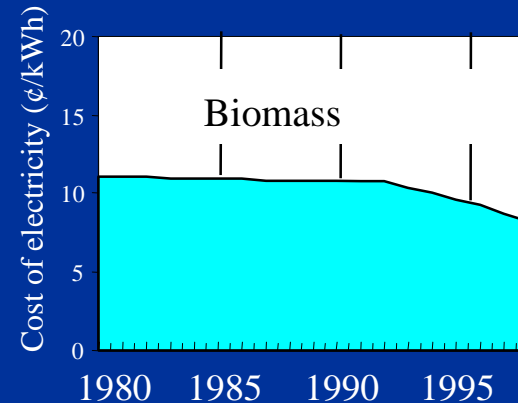
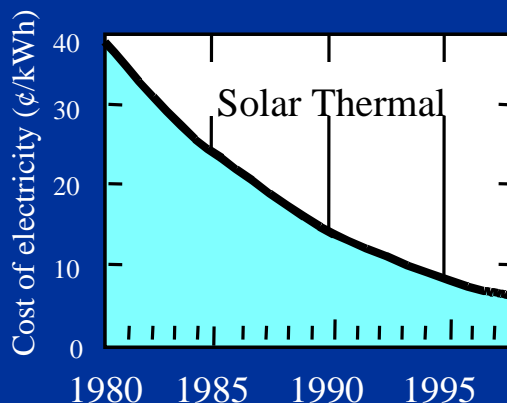
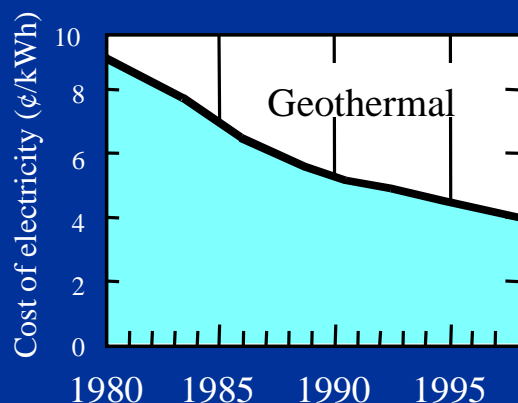
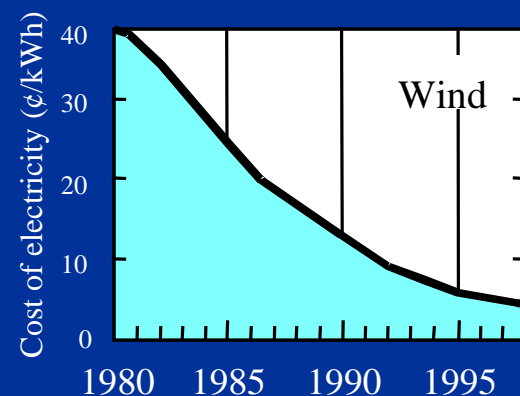
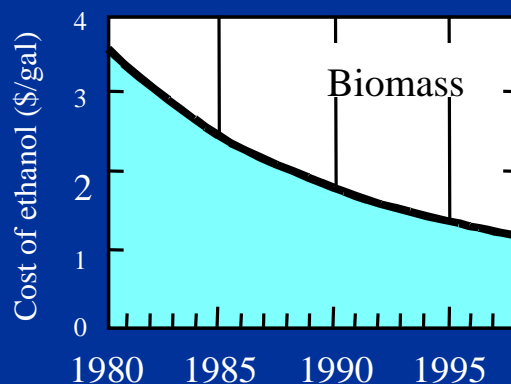
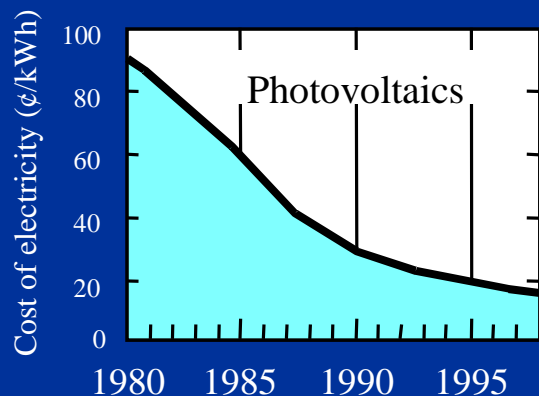


Geothermal



Renewable Energy Cost Trends

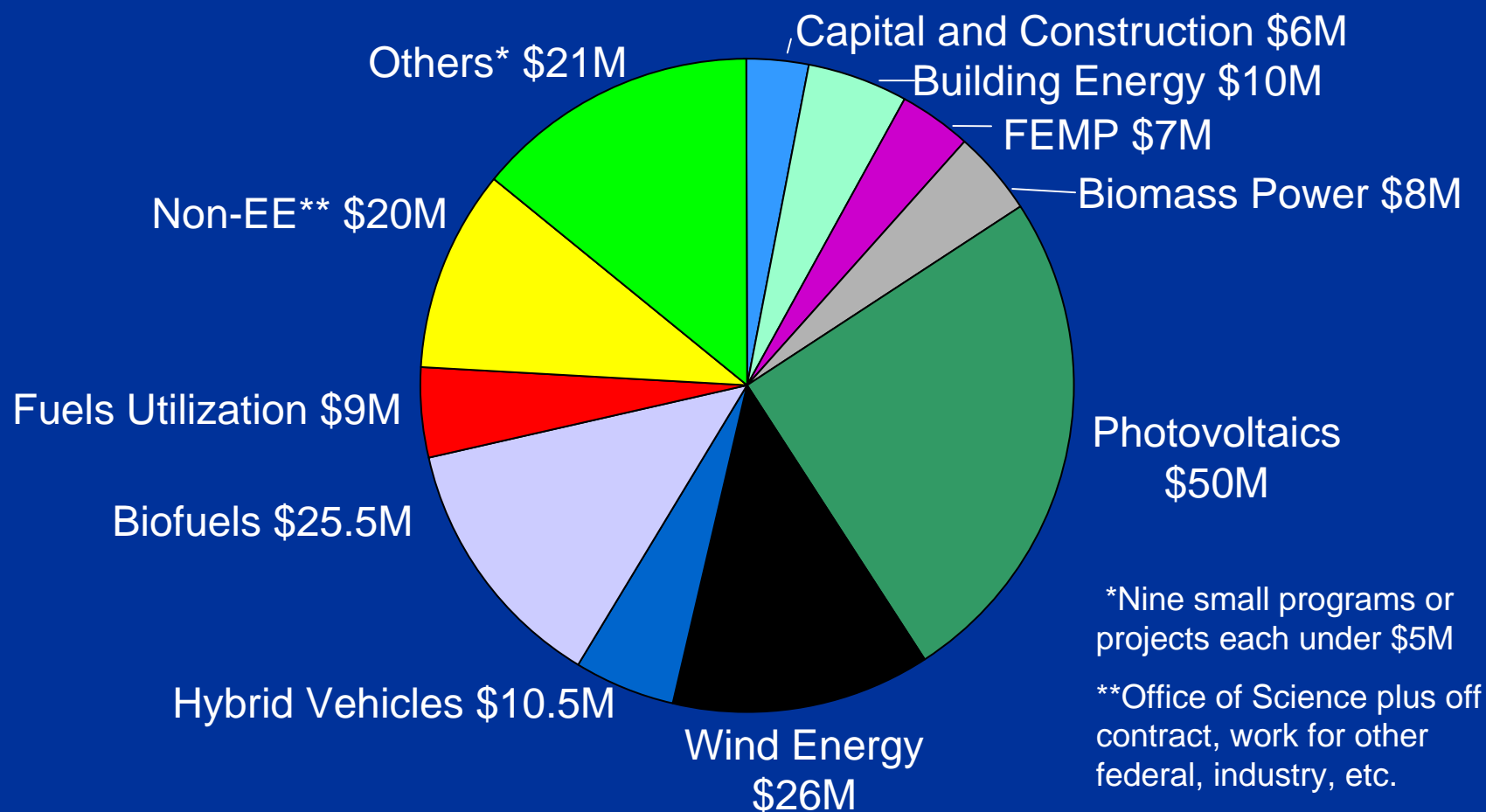
- Zero CO₂ emissions (or net zero for biomass)
- Currently avoids 70 MtC/yr
- Currently accounts for 10% of U.S. energy consumed (hydropower and biomass)



Source: Billman, Advances in Solar Energy submission, 1/8/99

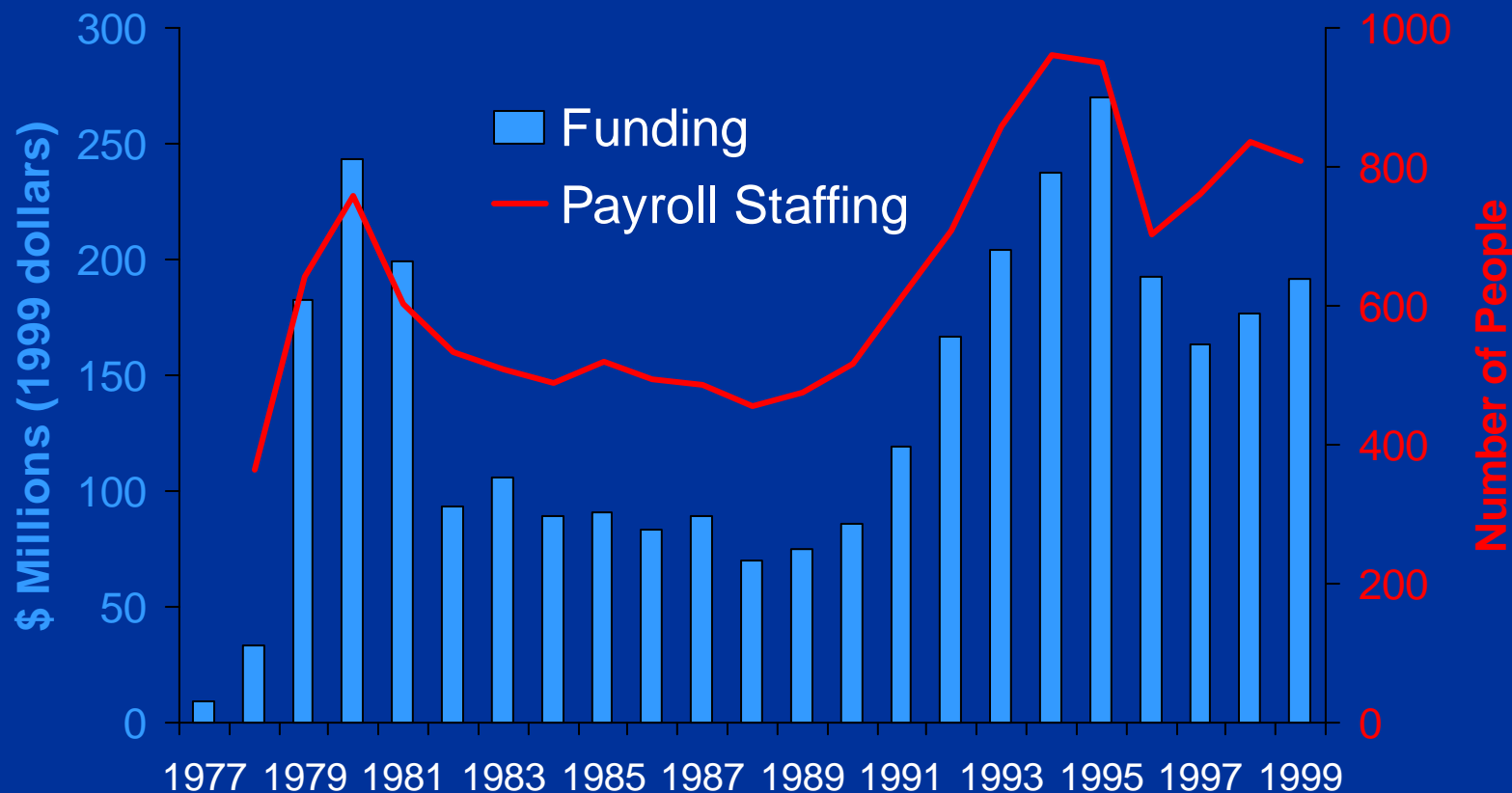
FY 1999 NREL Funding by Program

Total: \$193 million



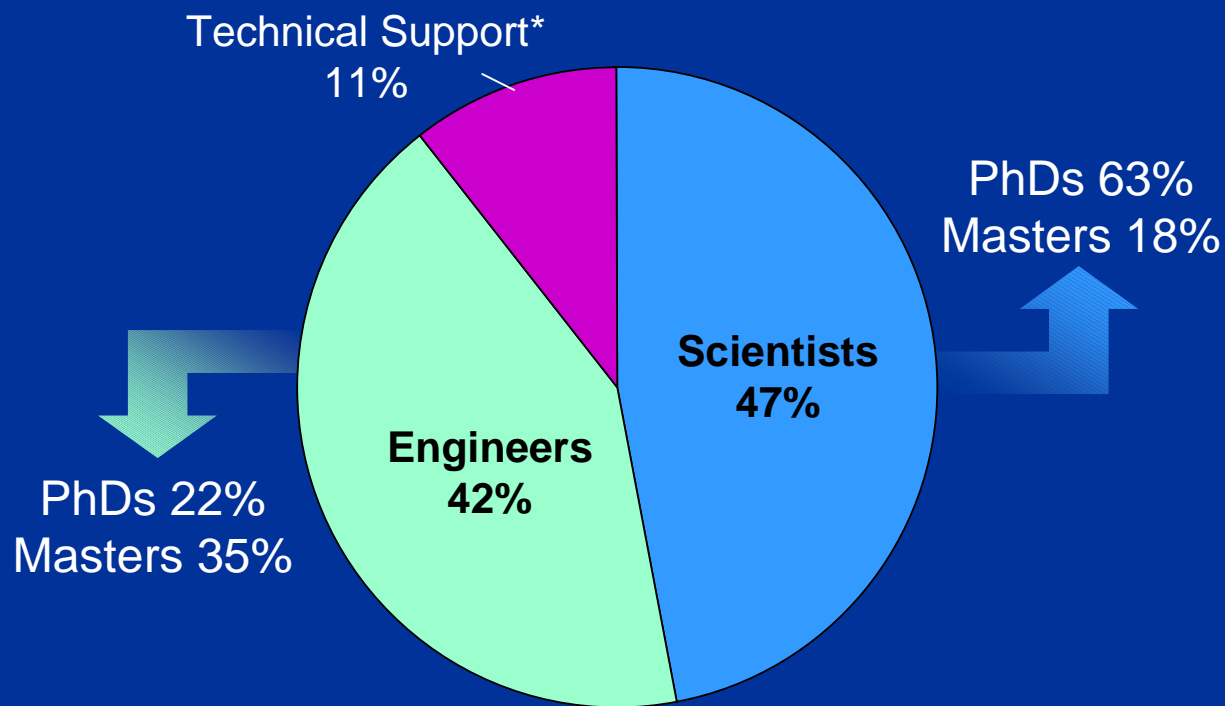
NREL Funding and Staffing

Funding in 1999 Dollars



NREL Technical Staff

Disciplines and Education

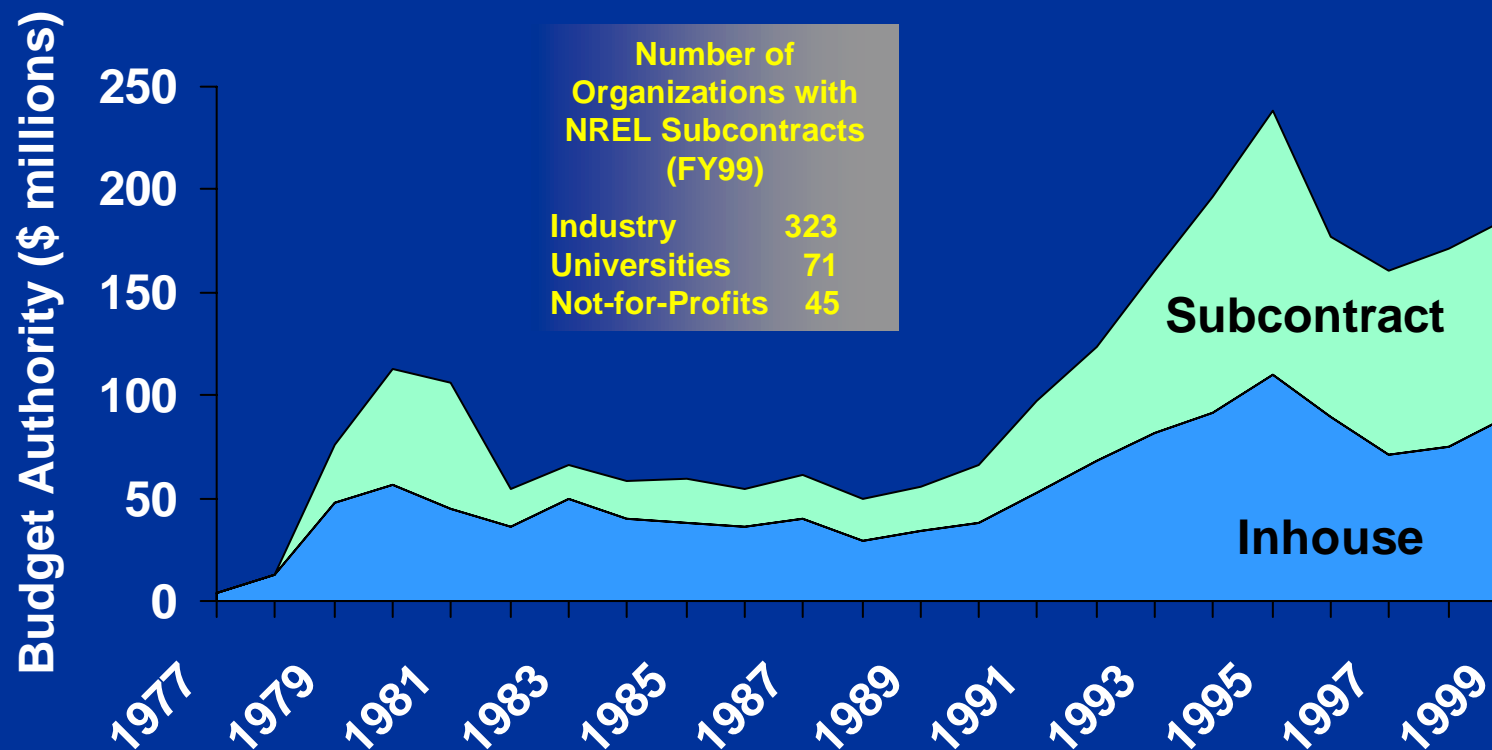


*Includes research technicians

Source: Sikorski, 1/12/00

NREL Subcontracts About Half of Its Funding

NREL Operating Funding





NREL National Advisory Council

Industry

Mr. Ray C. Anderson

Interface Corp

Mr. E. Linn Draper

American Electric Power

Mr. Roger Little

Spire Corp

Dr. Alexander MacLachlan

Former DOE Under Secretary for
Research and Development
Management

Mr. James Pignatelli

Tucson Electric Power Company

Mr. Robert Stempel

Energy Conversion Devices; former
Chairman GM

Mr. Mason Willrich

Nth Power Technologies, Inc.

Academia

Dr. Theodore Bickart

Colorado School of Mines

Dr. Scott S. Brown

Dartmouth College

Dr. G. Wayne Clough

Georgia Institute of Technology

Dr. Walter E. Massey

Morehouse College

Dr. Samuel H. Smith

Washington State University

Dr. Charles M. Vest

Massachusetts Institute of Technology

At-Large

Dr. Richard Balzhiser

EPRI

Mr. Walter Cunningham

Venture Capitalist; former Apollo
astronaut

Dr. John H. Gibbons

Former Assistant to the President for
Science and Technology

Mr. Michal C. Moore

California Energy Commission

Dr. Jefferson Seabright

U.S. Agency for International
Development

The Honorable David Skaggs

Former member U.S. House of
Representatives

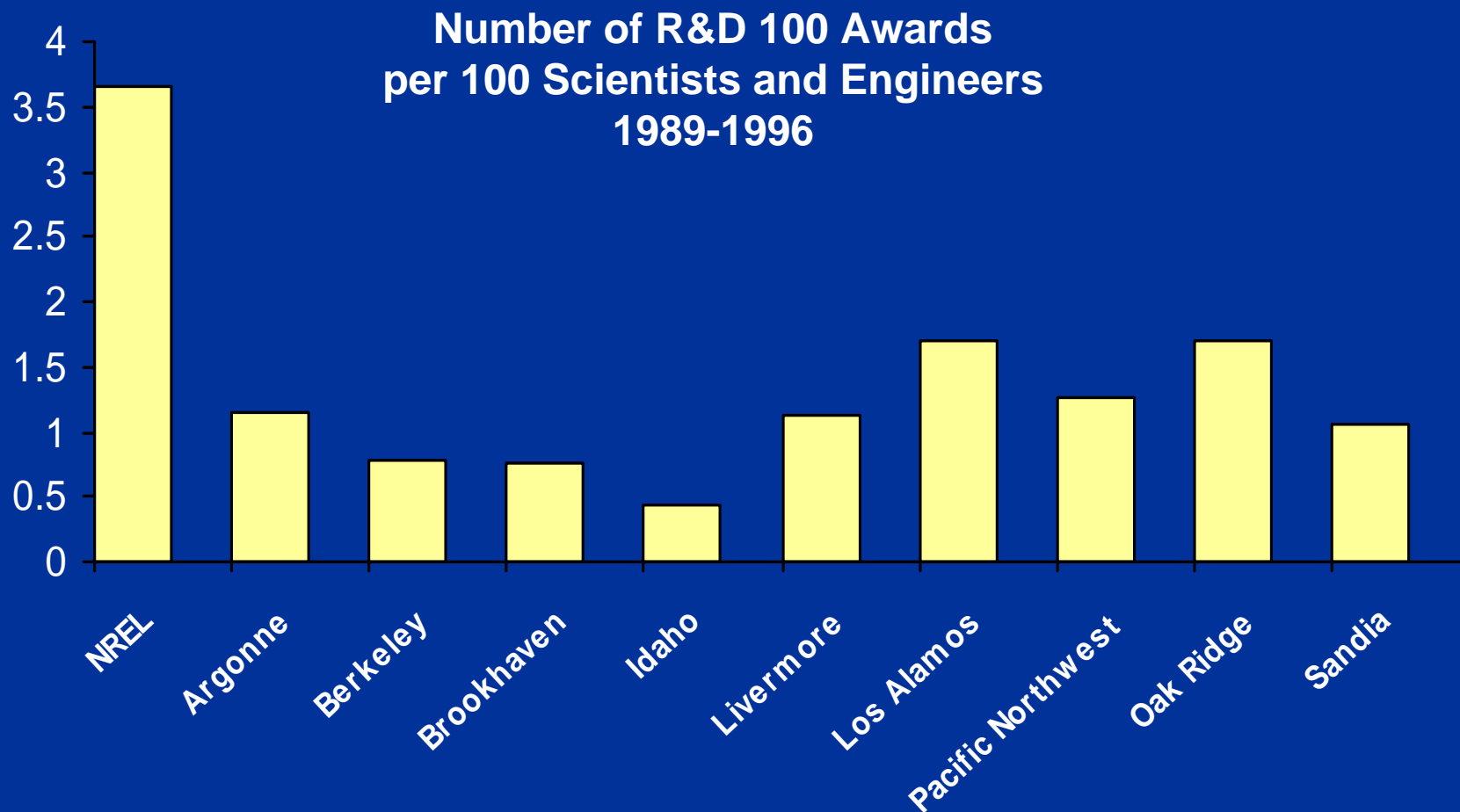
Mr. Chester Smith

Energy Division, State of Mississippi,
Department of Economic and
Community Development

The Honorable James Woolsey

Shea & Gardner; former Navy Under
Secretary; former Director CIA

R&D 100 Awards



South Table Mountain Site



National Wind Technology Center

